In The Matter Of:

BROOKLINE ZONING BOARD APPEALS HEARING

HEARING - Vol. 4 March 26, 2014

MERRILL CORPORATION

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Brookline Zoning Board Appeals Hearing

Case Number 20130094

40B Application by Chestnut Hill Realty

The Residences of South Brookline

March 26, 2014 at 7:00 p.m.

Office of Town Counsel

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Reporter: Kristen C. Krakofsky

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1	Appearances Paged Marshaus	1 2	Other administrative details? Am I forgetting anything? Ms. Steinfeld?
2	Board Members	3	MS. STEINFELD: No. You're fine.
3	Jessie Geller, Chairman	4	MR. GELLER: Okay. One last reminder I'm
4	Jonathan Book	5	not totally fine one last reminder. Our next
5	Chris Hussey Mork Zuroff Associate Member	6	hearing is April 10th at 7:00, same place. That will
6	Mark Zuroff, Associate Member	7	be a hearing that is dedicated to review of stormwater
7	Avi Liss, Associate Member	8	and drainage issues.
9	Comusal Maglan Esquina Vnaltidas & Dhuastain	9	Okay. Let's commence with peer review.
10	Samuel Nagler, Esquire, Krokidas & Bluestein	10	MR. HO: Thank you, Mr. Chairman. For the
11	Edith M. Netter, Esquire,	11	record, my name is Kien Ho with BETA Group. We're the
12	Edith M. Netter & Associates, P.C.	12	traffic consultant for the Town of Brookline.
	Alison Steinfeld,	13	And if I may, Mr. Chairman, what I'd like to
13	Planning & Community Development Director	14	do is, before I actually get into my presentation, I'd
14	Steven Schwartz, Esquire, Goulston & Storrs		like to spend a minute just to explain to the board
15	Kien Ho, BETA Group	15	· · · · · · · · · · · · · · · · · · ·
16	Robert Michaud, P.E.,	16 17	members and particularly the audience today what is a peer review, because I think it's important to
17	MDM Transportation Consultants, Inc.	18	understand what is our role as a peer reviewer for the
18		19	Town of Brookline.
19		20	MR. GELLER: I assume you'll be drawing a
20		21	distinction with a pure consultant?
21 22		22	MR. HO: Yes.
23		23	What is a peer reviewer? A reviewer is not an
24			independent study. It is an independent review by
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	Page 3		Page 5
1	PROCEEDINGS	1	registered professional engineers. I think it's
2	7:03 p.m.	2	important to indicate that, you know, we are I am a
3	MR. GELLER: Good evening, everyone. This is	3	registered professional engineer and I think mainly
4	a continuation of our hearing on 40B involving the	4	because any recommendations that we've provided I am
5	Residences of South Brookline. As you may recall, at	5	held accountable because I'm a registered professional
6	the last hearing we heard testimony from the various	6	engineer. And my job doesn't end when the permitting
7	boards and town departments. Tonight is going to be	7	process is completed. Any recommendations, any design
8	dedicated exclusively to a review of traffic and	8	that we recommended, I am ultimately held accountable.
9	transportation issues, and we have a peer reviewer here	9	Now, what is a good traffic report? My role
10	to assist us in this task.	10	is to ensure that the interest of the Town in terms of
11	My name again, for anyone who may have	11	if the proponent has provided a good traffic report or
12	forgotten it, is Jessie Geller, to my left is	12	if the report is being done professionally according to
13	Christopher Hussey, my further left is Jonathan Book,	13	industry standards and guidelines.
14	and at the end is Avi Liss. To my right is Mark	14	What's that? What's the industry standard?
15	Zuroff, and our legal counsel, Sam Nagler, is to my far	15	What's that all mean?
16	right.	16	It all has to do with basically what I've
17	Tonight's hearing is being tape recorded and	17	listed here. There are four basic entities that we
18	videotaped for public record. If you are speaking	18	have to make sure that the traffic study conforms to.
19	tonight, I would ask that you start by giving us your	19	The Institute of Transportation Engineers is an
20	name and your professional address and speak loudly and	20	organization which is recognized by the federal highway
21	clearly. Given the focus of this evening's hearing,	21	government where a lot of where all the traffic
22	you should anticipate that at one or more times you may be interrupted and we may have good, bad, or	22	engineers refer to the ITE, whether it's the trip
, , ,	ne mreminied and we may have good bad or	23	generation book or whether it's the you know,
23	indifferent questions for you.	24	related to parking generation. So every traffic

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engineer uses that as the guideline. 1

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The Federal Highway Administration -- any design that we will recommend or any design that the proponent, the applicant, is recommending has to conform to the MUTCD, which is the Manual of Uniform Traffic Control Devices which has been put out by Federal Highway. So that's another standard that we have to conform to.

Certainty the State of Massachusetts, MassDOT, there are guidelines of the state that has specifically -- you know, demonstrate as to how the traffic study should be conducted, so we want to make 13 sure that the study is being done according to the 14 state guidelines.

Locally, the Town of Brookline, there are rules and regulations that we have to make sure that, you know, the study is being conformed to. For example, whether there is street signage or parking, you know, related to zoning, which I will talk a little bit about later on, the adequacy of parking for this project.

22 So other than conformance to all the 23 standards, what do we look for specifically in our 24 review?

roadway system intersection, we want to make sure the proponent has adequately addressed and mitigated the impact associated with the project.

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And finally, the site plan, the overall layout in terms of traffic circulation, pedestrian movement, safety of vehicles, you know, especially emergency vehicle access in and out to the site. So essentially, those are the components that we will look into as part of our review.

With that, I'm just going to start with the study area. Showing here is the project site and throughout my presentation the orientation of -- you know, my slide's going to be consistent with this slide right here and this is Independence Drive. As, you know, my presentation -- what I'll do is I'll refer to Independence Drive as north and southbound and I'll be consistent with that. VFW Parkway is over here, and heading north, which is not shown on the map, you head towards Grove Street. Independence turns to Grove, and Beverly is over here. So that's the orientation throughout my presentation.

What the proponent has done is -- shown here are the intersections. There are approximately, you know, eight intersections which the proponent has

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Here are basically six components that we will look into specifically:

The study area: You know, the adequacy of the area that we will look into to make sure that there aren't other streets within the study area that's being overlooked by the applicant.

Data collection: The time of the day when data is collected. It's very important. We want to make sure that data is not collected when there is a school vacation period. So it has to be done at the right time.

Analysis methodology: In all the design guidelines and standards, there's a specific software that's been approved that the applicant has to use, and that's called Syncro Software Analysis. We want to make sure that the proponent is using that software.

In addition, we want to make sure that there are many ways to input the data and to integrate the analysis results. So we want to make sure that all that is done properly and according to, you know, industry standards and guidelines.

22 Once you have completed the study, the 23 results, which indicate the level of impact associated -- you know, because of this project, the included in this study starting from Sherman Road,

- Independence, all the way heading up to -- this is the
- 3 intersection of Beverly and Independence, and showing
- here, that's outside which -- you know, the map,
- unfortunately, is out of this -- it's the South Street
- and Independence Drive intersection. Over here is the
- intersections of Russett Road and Asheville and South
- Street and Asheville Road. So those are the eight
- 9 intersections.

The little dotted or broken circle lines, those are the two intersections which is the proposed site drive curb cut. That's right here, which is on the West Brookline side, and at the other drive, which is on the east.

15 So overall, those are the eight intersections 16 where the proponent has collected traffic counts in 17 early April of 2012 and they were collected during the peak hours, which is in the morning between 7:00 and 19 9:00 a.m. and the evening peak commuting hours is 20 between hours 4:00 and 6:00 p.m.

What they have also done is they have used some old data along Independence Drive which is dated 2007. What we have indicated to the applicant is that the 2007 48-hour counts, which they have provided --

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actually, it looked at the 24-hour volume at that 1 2 location, which is a little outdated. We request that 3 the proponent should collect new data along 4 Independence drive.

And in addition to the new data, we have suggested that they should also collect speed data because speed data was not provided as part of the analysis. Mainly it has to do with -- because Independence Drive is a four-lane roadway which is over 50 feet wide and in certain areas actually even wider, which is 55 feet. I'll talk a little more about Independence Drive later on as part of the mitigation.

In addition to traffic count, what they have done is also they've looked at the accident analysis of each intersection. What they have done is they've used MassDOT data, and a lot of times with MassDOT accident data -- because a lot of times they get the data from the Town, the police department, and then somehow they would input that data in their data system.

20 Our experience is that during the data, you 21 know, transition from the Town to that data system, a 22 lot of the accident data sometimes could be missed. So 23 what we have requested of the proponent is that in 24 addition to the data that they have looked at from

the trip distribution table right here, I just wanted to spend a little time on the analysis component of it.

So based on the data, the proponent has generated a trip generation for the project. As part of the trip generation, it indicated that what they have done is -- during the morning peak hour there will be approximately 100 new trips because of this new project. And this is within the one peak hour in the morning, somewhere between 7:30 and 8:30 a.m. when a 10 lot of the folks are heading out to work.

During the evening peak hour, folks returning home, there's a total of over 120 trips added -- new trips added to the roadway system. So that's part of the trip generation.

On a given day, the estimated total number of trips added to the system is approximately 1,200 vehicles per day. So those are the trip generations that the proponent has generated.

The concern that we have is, you know, once they have estimated the number of new trips that are going to be generated because of this project, it's where they're coming from, these new trips, and where they're going do. And I've shown here, which is a map of the project area, and the trip distribution is

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MassDOT, they should also, you know, obtain data from 2 the local police department to make sure that there

3 aren't any data that they may have missed at these

4 locations.

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5 I think what's important is that the 6 proponent, which has not looked at -- which I will 7 actually spend a little more time on later on as part 8 of the mitigation -- is these streets right here that 9 are shown in read circles. Again, I will talk a little 10 more about this later on as part of the mitigation. For example, at Russett Road, Bonad Road, South Street, 11 12 Beverly, and at this corner right here we want the 13 proponent to look at pedestrian safety connection 14 because the Baker School is right here. And certainly, 15 you know, the critical intersection, which is outside 16 of Brookline, the intersection of VFW and Independence 17 Drive, which is in Boston.

18 So these are the locations that, in addition 19 to what they have, you know, we would want them to, you 20 know, give us some information as to what, if anything, 21 that needs to be done or its impact associated with the 22 proposed project.

23 Once the data is collected, typically the next 24 step is to do the traffic analysis. Before I get into

essentially telling us, you know, the percentage of 2 people, where they're, you know, going to and from the 3 site and to where they're going, whether it's work or, you know, any trips that they're making.

So in the traffic report, the only information that was given under the trip distribution -- I'll start at the bottom -- is they're telling us that approximately 35 percent of the trip, you know, originated -- you know, going to and from the VFW Parkway and approximately 55 percent actually, you know, heading north and south towards Grove Street, and then the remaining 5 percent is South Street, and the last 5 percent is Beverly Road.

The information which is very important to us as we look at where the folks are coming from and going to, that's missing which -- what's not clear is this segment right here which we think, you know, there's going to be a lot of folks, especially with the large complex, Building 13 that's located over here, that there isn't any information as to, you know, how much of that traffic is going to be coming in and out of Asheville which could potentially, you know, most likely go through the neighborhood. That's shown right here.

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So what we would like to do is we have asked the applicant that they should provide us with that information so we can have a clear understanding of what the potential impact is within this area.

The next thing which I would like to do is, I just want to talk a little about the traffic analysis result and then I'll get into the mitigation concerns that we have.

The analysis results right now -- what the proponent has shown is there aren't any major issues with intersection operation based on -- as a result of this project. We would like the proponent to relook at or reanalyze some of the intersections, especially with the new data that they will be collecting so we can compare it and especially with more information on where the trips are coming from, especially in the eastern section of the development because I think those information will give us a better understanding of the overall traffic analysis result and its associated impact because of this project.

21 But in any case, what I'd like to do is just -- based on what was provided to us, I just wanted 22 23 to point out and discuss the concern that we have, what 24 was given as part of the mitigation in the report at

1 Typically, we would like to see the warrant 2 analysis to make sure that when you're putting an 3 all-way stop, you're not creating a condition that's 4 essentially unsafe. Areas where an intersection -- in 5 our experience, if you're providing a four-way stop, 6 you could create more accidents because what's going to 7 happen is, you know, people realize that 50 percent of the time or more they go through the intersection and 9 that there's no one on the side street. They'll end up 10 just blowing through the stop sign or they're just 11 going to do a rolling stop, which potentially could 12 create a lot of accidents.

There are other improvements that the proponent has proposed, especially the connection of the roadway to the site, which is Asheville. Currently the roadway width is very narrow, which is only 18 feet. The proponent did recommend that it will be widened to 22 feet, which is wider than what's out there.

Our recommendation is that, you know, the 22 is still narrow. I think it should be 24 feet mainly because, you know, you consider the vertical alignment and the horizontal alignment within that section of the roadways, especially, you know, a larger truck,

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Shown here -- basically what I have shown is, you know, there are numerous residential streets which were not mentioned in the mitigation. The concern that we have is, we think there's going to be a large percentage of vehicle trips that are going to use Asheville right here into this neighborhood where they'll cut through, you know, whatever they need to get to. So I think Beverly, Bonad, Russett, South Street, Asheville, I think all those streets need to be looked into to see if there's any potential impact, whether it's in the future especially. People are going to use those as a cut-through street.

If it's anything else, also, you know, with the Baker School right here, some sort of a pedestrian safety connectivity. It think that's going to be some benefit to the pedestrian activity in that area.

17 The mitigation that the proponent has proposed 19 essentially, which I'm just going to point out very 20 quickly and summarize, is they have proposed as off 21 site, and which is shown right here, the intersection of Asheville and Russett, they're proposing that there 23 should be a four-way stop condition. The proponent did not provide any four-way stop analysis.

emergency vehicle having to negotiate as they, you 2 know, access in and out of the site.

You know there are other sidewalk improvements which they have suggested within the site -- again this is just within the site -- and they also recommended some improvement at their new curb cut: site drive, stop signs, some streetscaping, tree plantings, and whatnot.

They did mention a little about TDM. What is TDM? Transportation Demand Management. What that means is, you know, ways to encourage folks so that they don't drive the car such as -- currently there's a shuttle bus at, you know, Hancock Village that takes folks to the train station. We would like to recommend that, you know, those shuttle services be increased because you're going to be adding a lot more, you know, folks at the site.

In addition, the two Zipcars currently that they provide, we recommend that they should also increase that to encourage folks that live in the area so that they don't have to drive, so that they could take the shuttle and use the transit.

So I think, essentially, those were the mitigations that they have recommended. So what we

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would like to see is, additional mitigation should be considered.

3 For example, as I have indicated earlier on, 4 Independence Drive. You know, the old data indicated 5 that there's approximately 14,000 cars that go through 6 that roadway, and it's a four-lane roadway. As to 7 comparison as to -- you know, so people know what that 8 14,000 cars is -- and if you're familiar with Route 16 9 in Wellesley, that goes through Wellesley, Route 16, which is essentially a two-lane roadway, and that 10 11 roadway serves approximately 16,000 to 20,000 cars per day depending on which section of Route 16, from Newton 12 13 all the way to, you know, Wellesley Square. So that 14 section of roadway is two lanes, and in this case it's 15 14,000 and it's four lanes.

16 So what we would like the applicant to look 17 into is, you know, do we really need the four-lanes? 18 Can this section of the roadway be designed so that -what we call the term is a "complete street." What 19 20 that means is we want to make sure that that roadway 21 can accommodate vehicle volume, safe bicycle, you know, 22 accommodation, safe pedestrian crossing at this 23 intersection right here.

And I'll give you an example. The crosswalk

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1 the neighborhood adjacent to the site.

I just want to talk a little about parking
associated with this project. What we have looked at
is we did, you know, a quick estimate as to -- we did a
comparison as shown here in this chart. Very simple.
You know, we have proposed approximately 192 units.
The proposed -- which is based on a rate of 1.4 and the
number of parking spaces that they're providing is 342.

If we go with the zoning that's required in Brookline, what I'm showing here is 2.0, 2.3. The 2.0 is really -- you know, essentially it's a one- to two-bedroom on the 2.0 rate. If it's a three-bedroom, a four-bedroom, then 2.3. So based on that information, we would come up with a total number of parking spaces, 360.

We have some concern with the 1.4 rates. It is unclear exactly how that rate is derived. The report did identify some observations which they have done based on existing condition of the site, and that is in April of last year. That made some observation as to, you know, what is the capacity of the occupancy of those parking lots. I think, based on that study, they indicated that currently I think it's 1.3 rates. So as a result, you know, if they could provide 342 and

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at the intersection of Sherman and Independence, that's approximately 55 feet. That's a long crosswalk. So by reducing the width of the roadway, the four lane is really not needed. So you're reducing the crosswalk distance, and you're providing a safer crossing.

What we also would like the proponent to look at is the intersection of Sherman and Independence. I have tried to drive from, you know, one end of the site drive to the other side and it is very, very difficult to cross and find an adequate gap. So we would like the proponent to look to see if that intersection warrants some kind of a traffic single, whether it's a vehicle control or a pedestrian control, just to provide added safety to, you know, the intersection.

Certainly other intersections also to look into is -- you know, if that intersection does warrant some kind of a signal, can that be coordinated with the signal at Beverly or at South Street or maybe even at, you know, the intersection in Boston, the VFW Parkway -- that's over here -- so that they would all synchronize and talk to one another.

So I think those are some of the mitigations that we would like the proponent to consider, whether it's within the site and also, you know, surrounding so that gives you a rate of 1.4 and that appears to beadequate.

The concern that we have is the 1.4 rate is --

you know, if they could clarify exactly how they
derived that rate. And also the concern that we have
is the observation that they have done because, you
know, I have driven the site, you know, like about 7:30
or so and, you know, it's essentially at capacity.
That's what you have at the existing site. So we're
concerned that, you know, the 1.4 rate is, you know,
maybe misleading.

The other concern that we have has to do with -- if you look at the 1.4 rate and the 342 spaces, it's okay if the development is one cluster. You know, if they're all in, like, one area.

But in this case, they're actually scattered, some over here and some over on this side. So if you look at the information that was provided to us, especially at Building 19, there are 116 units and there are about 146 spaces. So if you take that ratio, you're actually, you know, approximately like 1.25 rate I think. So while you may be 1.4 and 342 spaces, your parking spaces are actually scattered, you know, throughout the site. The report did indicate that

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Page 24 max the design would allow. We would like to, you

Building 19 would have to share, you know, some of the parking spaces that's shown here at this location. So we do have some concern with parking that's being generated for the study.

MR. BOOK: Excuse me. I'm just having trouble understanding the relationship between the rates and the number of spaces. For example, if the proposed is 1.4 spaces per unit -- is that what it is? 1.4 spaces per unit?

MR. HO: That's my understanding, yes. MR. BOOK: So 1.4 spaces at 192 units is what, 268?

13 MR. HUSSEY: 1.78. Actually, it appears in 14 the MDM report, as well, as 1.4.

15 MR. HO: Right.

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16 MR. HUSSEY: If you take the numbers, the 342 17 parking spaces, divide it by 192, you get 1.78.

18 MR. LISS: 1.4 times 192 is 268.8.

19 MR. HO: Like I said, we questioned the 1.4. 20 You know, why 1.4 it says in your report. And then if 21 you look at the graph that was given to us, I think

22 it's this one here, it shows 1.78.

23 MR. LISS: So it could very well be a typo.

24 MR. HO: It could be. 2 know, understand a little better on -- while this is 10 3 percent, if you're going straight, it's okay, but then 4 you also have a lot of other side streets that you have 5 to connect to, and more so you have to connect to 6 Building 19 via garage, you know, at both the upper and 7 the lower level right here.

So when you have a very steep grade, you have a vertical alignment and then you have also potentially some site line issues that we would have going in and out of the garage.

And not knowing the detail of the design, because a lot of the design is still on a conceptual level, as we all know the site right here, this entire site on Building 13, if you go up and observe it, you know, there is a lot of ledge and it's kind of like up in the hill. So there has to be a lot of ledge that needs to be removed to physically make this site buildable. So those are some of our concerns related to the grading itself.

We have also some concern with the emergency vehicle turnaround at some of the hammerhead areas. I know in this case, I believe the assumption is that while it's shown as a roundabout, that you could

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MR. BOOK: And the same -- the numbers don't 2 work out in what's stated as what's required under the

Brookline zoning, two spaces for 192 units is 360. MR. HO: I didn't get into the detail. I know this is something that we had worked out with some of the folks here with me today. And the zoning also takes into consideration, you know, the affordable and then the market rate. So those are the fine details that we tried to, you know, compensate for. For example, the affordable units, we used the 2.0 or the one car per -- so we took all that into consideration, so fine detail calculations. So based on that, all

MR. BOOK: Thank you.

MR. HO: I do want to spend a little time regarding the site plan. We do have a lot of concern associated with the layout of the site. I think I have mentioned earlier on -- I'll start with Asheville Road right here -- the proponent is proposing a 22-foot, you know, widening. We think it should be 24 feet.

said and done, you know, the magic number was 360.

2.1 And the other concern that we have is the 22 steep grade that is over this area right here. And 23 based on the plan that, you know, we have, we have at 24 least about 10 percent grade. And 10 percent is the

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actually drive over this circle right here. So I think this is just one of the few areas that we have some 3 concern with, you know, the hammerhead design.

I understand the proponent has done some AutoTURN analysis. So what that is is a computer software where it actually shows the turning path of an emergency vehicle or any truck that you would like to see, whether it's a 18-wheeler, it's a moving company that comes to the site.

So we have requested that the proponent provide us with that information. And I believe recently, you know, they have done some analysis, so we will review that AutoTURN analysis as it relates to the hammerhead design for the site traffic circulation.

Not mentioned here is you want to make sure that pedestrian connection -- I know the proponent has identified some additional sidewalk, so we want to make sure that the proper crossing location -- you know, those are the details that need to be shown mainly because of the vertical alignment of the steep roadway. You know, sometimes placing location of the crosswalk and pedestrian safety, those are very, very important.

This is another hammerhead design we would

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like some AutoTURN analysis to look into to make sure 2 that they are functional from an emergency vehicle 3 standpoint.

4 Finally, what I'd like to do is touch a little 5 on the construction traffic aspect of it, which the 6 truck study did not mention. I think a lot has to do 7 with -- our biggest concern is Building 19, the site right here. Certainly, other sites, you know, there 9 will be, you know, contractors, delivery truck traffic 10 going to be generated. We would like to know where, 11 you know, they'll be going to and from.

And especially this site right here which is 13 consistent with a lot of ledge. We know the proponent 14 would have to clear a lot of ledge. And I know our 15 site reviewer took a quick look at this site right 16 here. We seem to think that approximately 20,000 tons of ledge might have to be moved to make this

17 18 buildable. Again, that's information based on what we

19 have. And so that equated to a lot of trucks that have

20 to haul out ledge. And we would like to know how those 21 trucks, you know, would be handled as to how they would

22 get to where they need to get to to unload that ledge.

23 And certainly delivery trucks, you know, contractors'

24 vehicles.

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MR. HUSSEY: It sounds like you have not been 1 2 able to view the applicant's PowerPoint presentation.

3 There are a number of drawings there that show the fire 4

truck and the hammerhead configurations. They may have been using this AutoTURN program that you talked

6 about. You can get it online, I think, through the

7 Town, the PowerPoint presentation.

MR. HO: I actually do have those presentations and, you know, I've gone through them quickly. They were very small, so I'm requesting, you know, a larger version so I could see, you know, whether the turning path hits any cars that's going to

13 be parked, you know, as they make the three-point turn 14 at the hammerhead. MR. HUSSEY: Okay. Because I think that's

really one of the critical arguments. The applicant maintains they are successfully addressing the emergency vehicle issue and the various town departments are not agreeing with them. We need to have somebody clarify who is right on that issue.

21 MR. GELLER: Questions, let's start with 22 those.

23 MR. LISS: This is your expertise. However, 24 I'm trying to understand how -- it seems one of your

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So I think construction traffic is also our concern in terms of, you know, how this project is

going to be constructed and how the neighborhood in the area, including Independence Drive, will be impacted in the future.

So in summary, you know, we -- I know in our report we have a short summary but I take liberty to try to break it out. So there are about 13 concerns that we have listed here. I talked about every single 10 one of them, so I will not repeat them. And so I think we have some work to do with the proponent to try to, 11 12 you know, resolve some of the concerns that we have, 13 data that they need to collect in terms of addressing 14 some of the neighborhood streets, especially with 15 traffic calming. That's something that, you know, we 16 looked into. They would have to collect some data on 17 whether it's Russett or South Street because we need to 18 have a base information later on even when the project

19 gets built to evaluate the potential cut-through of 20 those neighborhood streets. 2.1 So the next step is really to work with the

proponent and to update our report once we have some of 23 the issues resolved. And that concludes my 24 presentation.

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recommendations was to convert Independence from four 2 lanes to two lanes to what you called a "complete 3 street," I believe.

My mind thinks: Four lanes, better, more cars; two lanes, bad, less cars. Can you explain for me what the conversation of four lanes to two lanes actually does? What would be the impact if that was a course followed by the proponent? What would that result in?

MR. HO: I think the conversion of the -- say it's from four lanes to three lanes or two lanes, the benefit that you get when we say a complete street is -- there's always competing interests. Do you want cars to go through there smoothly without any interruptions, which could mean they could fly through, you know, this section of Independence Drive? And that's one of the data, you know, that we have requested, you know, when they do go out and collect new data. We want to include speed.

We seem to think that right now the four lanes, you have more than enough capacity to handle the 14,000 cars per day, based on our experience. So I think with a narrow street -- another

23 24 term they use is "road diet" -- you could design the

8 (Pages 26 to 29)

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- roadway that you could accommodate your capacity, which 2 is car, mixture of car can go through, because you 3 don't want to provide the road diet where you create a 4 choke hole. You don't want that. So you want to have
- a roadway system that could accommodate the cars and at the same time, you know, bicycles can safely, you know, 6 7 travel that section of the roadway and pedestrians can 8 safety cross that section of the roadway.

So I think it's -- overall, you know, the complete street will provide safety with vehicle 10 11 operation, safety with pedestrian, safety with bicycle, and that's what we are looking into. 12

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MR. HUSSEY: Now, the definition or four-lane 13 14 nature of that, does that include parking on both 15 sides? So is it four lanes plus parking on both 16 sides?

17 MR. HO: Right now what you have is four lanes 18 with parking, and that's very, very wide. Because 19 whether coming up from Sherman or any of the other side 20 streets right now, not only do you have to look at four 21 lanes of traffic, but also you have competing cars that 22 are parked on the street that a lot of times block your 23 view, so it's a site line issue.

MR. HUSSEY: Okay. Thank you.

have to do to enter a roundabout. You know, you're

2 supposed to yield as you enter and, you know, so if

3 everyone, you know, knows what they're doing, a

roundabout can effectively slow and calm traffic,

provide both capacity and safety. That's the function

6 of the rotary.

7 MR. ZUROFF: But realistically, not everyone knows what they're doing when they hit a rotary or a

9 roundabout. And if you're proposing a solution that

10 would allow the traffic to go continuously from

11 Independence Drive, from VFW Parkway all the way to the

rotary, then you're going to have traffic, I would

think -- and I'm asking you -- you're going to have 13

14 traffic backing up not only at the rotary but it's

15 going to back up past Russett and it's going to back up 16 onto Independence Drive.

17 And so I think, the way I see it is, you're 18 going to actually cause more of a backup and more of a

19 congestion because people flow through rotaries 20 quickly. A lot of people don't know what to do at a 21 rotary.

22 MR. HO: I have specifically requested that 23 the proponent would look into that and I would like

24 to -- you know I want them to tell me, because I'm

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1 MR. ZUROFF: Just a follow-up on that. You 2 said you wanted to avoid a choke point if the road was 3 narrowed, but you've got a rotary at Grove Street that no matter how quickly the cars go through Independence 5 Drive, they're still going to hit the rotary and at 6 that point, and I know it exists now, that's a choke 7 point. I mean, rotaries don't flow smoothly. They 8 stop and start. So are you considering that in your 9 analysis and your new recommendations? 10

MR. HO: As a roundabout? In terms of a roundabout at some point --

12 MR. ZUROFF: All that traffic that comes 13 northbound is going to hit that rotary at some point.

14 MR. HO: I think when I say choke point, what 15 I meant is, you know, create traffic congestion. You 16 know, meaning cars would actually, you know, stop and 17 create a queuing problem.

So I think in the case of the roundabout or 18 19 the rotary that you have today is to slow cars down so 20 that they could enter the intersection safely and not 21 create any major queuing backup. So I think the roundabout, or the intent of any roundabout is to -you could increase or process a much larger capacity.

23 24 That's if everyone knows how -- you know, what they

curious as to if we could better manage Independence Drive. How can we improve Independence Drive? You

3 have four lanes, you have 14,000 cars, you have 55 feet

of crosswalk. What can we do to improve Independence

5 Drive? So I want them to tell me basically what are

6 your options.

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7 If they can convince me that a two-lane or 8 three-lane is not going to work, I'm willing to, you 9

know, take all that into consideration and evaluation.

10 So that's my point to the applicant.

MR. GELLER: Any other questions?

12 MR. BOOK: We heard concerns from the fire 13 department and transportation about -- you had 14 mentioned it a minute ago -- the driveways with the

15 hammerhead turnarounds. And I don't know if this is an

appropriate question to ask you, but are there 16

17 alternatives to that, to that design that are better

18 that would work in the area, or are you not -- you 19 haven't yet formulated if it's even a problem?

20 MR. HO: I have not looked at the details of

2.1 the truck turning radius analysis. I have seen a

22 hammerhead that's being designed for, you know, whether

23 it's an emergency vehicle or a truck to turn around.

There are right-of-way issues.

(Pages 30 to 33)

Page 34 Page 36 1 MR. HUSSEY: The hammerhead -- I guess one of 1 The ideal solution is a cul-de-sac. Basically 2 an open-wide traffic circle. In the old days we can 2 the other questions I've got relative to emergency 3 3 see a lot of big circles and, you know, a fire truck vehicles is that, looking at the eastern -- the western 4 just makes one big circle and they're out of there. So end of this site, there's a long drive from that's the ideal. And I think that design feature Independence Drive over towards the Baker School with a 6 typically requires a lot more right-of-way, if I may 6 hammerhead configuration there. Should the width of 7 say, and the hammerhead, you know, significantly 7 that driveway be sufficient for fire trucks to pass? reduces the right-of-way in terms of accommodating a 8 MR. HO: We would like to see, you know, a 9 9 hammerhead. roadway minimum with 24 feet and I know --10 10 MR. GELLER: But the usage of a hammerhead MR. LISS: Can you go to a different slide? I 11 design is not illegal; correct? 11 think it will be better referenced that way. MR. HO: No, it's not. 12 All right. So if you look in the western top 12 13 MR. GELLER: It is used? 13 corner I believe is what Mr Hussey is speaking about. 14 MR. HO: Yes. 14 So that -- he's asking, in it's current state can 15 MR. GELLER: Okay. And the question becomes 15 two -whether there's sufficient width and length to support 16 Well, you can speak for yourself. 16 17 that usage, and that's dictated by the length of the 17 MR. HUSSEY: Go ahead. 18 18 driveway and other factors. MR. LISS: My understanding is that two fire 19 trucks -- in this current state, can two fire trucks 19 MR. HO: Right. What we would look into is --20 as we look into the detail of the hammerhead design --20 pass each other on that level? 21 is we would look into a snow combination. Because if 21 MR. GELLER: Yeah. Once a fire truck does you go out to the site more recently, we noticed that 22 turn around at the hammerhead, assuming there's a fire 22 23 some of the turnaround is used for snow storage. So 23 truck at the entrance, can they pass? 24 24 when you have that situation, the hammerhead -- the MR. LISS: Right. Page 37 Page 35 1 fire truck can't use the turnaround. 1 MR. HO: I'd like clarify with the applicant 2 So I think we would like to see a slightly 2 if that section of roadway is 22 feet or 24 feet 3 larger hammerhead. In the event if you can't --3 because if it's 22 feet, I think I would be concerned. ideally, you know, if they would not use it as a snow 4 I think two fire trucks would have a tough time passing 5 5 storage area. And just in case -- you know, sometimes each other. 6 6 the plower, they just plow it into the corner. Because If it's 24 feet, I think that's something that that would restrict the length and the width of the would not be an issue. 8 fire truck to make that turn. So those are the things MR. GELLER: Mr. Schwartz, do you know the 9 9 that we would look into in terms of the hammerhead answer to the question? 10 design. 10 MR. SCHWARTZ: 22. 11 MR. GELLER: 22. So is it a concern? 11 MR. GELLER: Are you aware of any safety 12 12 regulations or guidelines that govern or dictate usage MR. HO: Yes, I would be concerned. I think of hammerhead turnarounds? 13 that applies to -- you know, on Asheville. As I 13 14 MR. HO: As long as the AutoTURN analysis 14 indicated earlier, I think they're proposing 22 feet. demonstrates that they could physically make the 15 MR. HUSSEY: My other question is procedural, 15 three-point turn without encroaching any parked cars in 16 actually. 16 17 17 the area where there are parking spaces, I think that MR. GELLER: Procedural for --18 MR. HUSSEY: For getting the information from 18 usually meets the design standard. 19 MR. GELLER: And there are no independent 19 MDM, updating your information and getting back to us. 20 MR. GELLER: Yeah. We'll address that. 20 regulations that you're aware of that govern using 21 these kinds of turnarounds? 21 MR. HUSSEY: Okay. 22 MR. HO: No. 22 MR. GELLER: And if I forget for some reason, 23 23 MR. GELLER: Do you have a question, kick me or raise it again.

10 (Pages 34 to 37)

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Mr. Hussey?

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You started your presentation with basically

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1 outlining for us how you go about your analysis, does 2 it meet standards and guidelines. There is information 3 that's missing, and you've noted what you believe is 4 missing and needs to be filled in both in terms of content that is dated as well as content that was not 6 supplied.

Forgetting that for the moment, do you believe that the methodology of analysis is correct in this report in general from what we see, of the information we do see?

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10 11 MR. HO: I think the trip generation 12 methodology is acceptable. And the analysis, what they 13 have presented is acceptable also, the software that 14 they have used. But I would like to see some updates 15 before I draw my final conclusion on the analysis results, because the results, you know, basically 16 17 dictates the mitigations that we will get into. 18 MR. GELLER: Thank you. 19 MR. HUSSEY: I do have one more question.

20 On page 3 of your letter that we received recently you indicated that using the ITE methodology, 21

the proposed 144 additional residential apartment units 22 23 are expected to generate approximately 1,300 vehicle

24 trips a day. And I'm sort of curious, shouldn't the 1 for explanation purposes. If you were to stand, say,

2 in front of all the major gateways, entrance points on

3 the site, you know, if you have like five or six people

4 in all the gateways, if you were to count on a given

day, 24 hours, you would come out to a total of cars coming and going in the site of 1,300 cars per day. 6

7 MR. BOOK: So the 1,300 is the incremental 8 addition from the 192 units? Or that's the total for 9 the entire --

MR. HO: That's the new trips. Those are the new trips.

12 MR. BOOK: 1,300?

MR. HO: The 1,300 doesn't exist right now. 13

14 MR. BOOK: And that's based on just averages 15 on other projects? I mean, how do they --

MR. HO: That's based on the ITE trip 16 17 generation. You know, there's a formula that we would 18 use to estimate that trip. This is based on a lot of 19 research that they have done.

MR. BOOK: And I realize this isn't the most urban part of Brookline but nonetheless, it's not -we're not out in Texas. I mean, people -- not everybody jumps in their car all the time to drive. I mean, that's an accurate -- I guess I'm finding it a

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number of vehicle trips be predicated upon the number of parking spaces rather than on the number of dwelling units?

MR. HO: No. The ITE has two sets of guidelines for the number of trips, you know, associated with the number of units and they have also very specific guidelines as to parking generation, the need for parking. So those are two independent sets of design guidelines that we follow. And those are all based on very, very expensive research as to why they did -- you know, what they have to do.

MR. BOOK: Can I just ask for clarification? 13 So when you refer to the 1,300 additional trip generations a day -- and that's from the 192 units?

MR. HO: Yes, that is correct.

MR. BOOK: So when you say the 1,300, that's 16 17 1,300 both in and out combined or one round trip?

18 MR. HO: That's total in and out on a given 19 day.

20 MR. BOOK: So in and out are counted 21 separately?

22 MR. HO: Right. I take that back.

23 So the 1,300 is on a given day. If you were

24 to stand, say, for example -- you know, this is just

little hard -- I'm a little surprised that 192 units 2 would generate -- and that's 340-odd cars -- that that

3 would generate 1,300 trips a day; that people are

jumping in their car that much and going in and out.

5 So does it take into consideration the area that you 6 live in?

MR. HO: Oh, yeah. It's basically, you know, a lot of research being done and it's the ITE trip generation that everyone, you know, uses to estimate trips, whether it's on a given day or, you know, during peak hours that I've indicated during the commuting, morning and the evening peak hours.

MR. LISS: Can I just follow up on that real quick.

15 So Brookline is diverse. Northern and Southern Brookline is clearly very different. When you 16 17 put this in the system, do you say Brookline 02446 and 18 then it just says, okay, population, or do you say this 19 is the, you know, per capita? Does it take into 20 consideration the uniqueness of this area? I mean, I 21 guess that's really what you said, but can it do that? MR. HO: Well, you know, to explain it very

22 23 easily, the analysis taken into consideration of, you know, folks -- the percentage of folks, where they're

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going to work and, you know, the typical trips for 1 2 residents. You know, when they would leave and when 3 they would come back. You know, so that's really what

4 that is. And, you know -- yeah. I'm not going to get 5 into any more detail on that.

MR. HUSSEY: It works out to be about three and a third times each day somebody would go out and come back if you take the 1,300 and divide it by 192.

MR. LISS: Yeah. But there could be two to four people in a unit. There could be five people in a unit, or four.

12 MR. HUSSEY: Well, it's a little less than two 13 parking spaces per dwelling unit.

14 MR. LISS: But don't forget -- so that takes 15 into consideration, I'm presuming -- one of the issues 16 is, you could get picked up, carpooled. So someone 17 else living there, someone can pick you up, so it's 18 just a new destination generation.

19 MR. HUSSEY: That's true. Maybe more than one 20 car per unit maybe is not unreasonable.

MR. GELLER: Anything else? 21

22 Thank you.

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23 MR. HO: You're welcome.

24 MR. GELLER: Don't go too far.

way that is responsive to some issues that you've heard 2 from other departments like Police, Fire, and Public

Works.

4 Just as a precursor, we fully intend to produce a response document to this Board that will go 6 through each and every comment and provide an 7 appropriate technical response, as is the customary standard and practice. I have, over the last two days, 9 been very busy working with an applicant who is very much appreciative of responding efficiently and 10 11 appropriately to comments.

What I heard tonight did throw me a little bit, to be honest, in that some of the material that was presented by the reviewer was not presented in the documented peer review letter that we received, you know, and it really relates to the expansion of the study area which appears, in my view, to be somewhat contrary to what was presented in that written document.

So I do fully expect that as we move forward there would be someone level of communication between the review consultant and the applicant, me in particular, so that we can appropriately respond in advance of a public hearing without hearing things for

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MR. HO: I'll be right here.

MR. NAGLER: Just one quick question. Does the applicant's traffic consultant agree with the 1,300 number?

MR. HO: Yes, we agree. They generated the number. They generated the 1,300. And so based on the methodologies as they have derived, we agree with the way they derived the total volume.

MR. GELLER: Thank you.

10 Mr. Schwartz, did you want to take a moment and rebut or respond to some of the questions? 11

12 MR. SCHWARTZ: We'll have our traffic 13 consultant do that, and I'll reserve some time at the 14 end.

15 MR. MICHAUD: For the record, my name is 16 Robert Michaud, a principal at MDM Transportation 17 Consultants based in Marlborough, Massachusetts at 18 28 Lord Road. I'm very pleased to be before the Board 19 this evening as a follow-up to our prior testimony.

20 What I'd like to do tonight is review some of 2.1 what Mr. Ho had presented as it was documented in his peer review we received later on Friday. We really

23 only had a couple of days to look at this. And I'd 24

also like to try to fold some of our comments in in a

the very first time. So with that as an opening, we 2 appreciate the comments, and what I'd like to do is 3 step through the individual pieces of peer review.

We're pleased, generally, with what the peer review findings were. There were many levels of concurrence and agreement.

First, at least we believe based on what we had you seen on Friday, that the study was, in fact, identified as an appropriate system of intersections to study as part of this project; secondly, that the trip generation methodology, as they stated in their 12 submittal, is appropriate and to industry standard; 13 that the trip distribution methodology is appropriate 14 and follows industry standard; that the traffic operations as they were modeled, in fact, do meet 16 industry standards, and that the findings of that 17 indicate that the impact of traffic operations as 18 reported in our November traffic report are accurate. 19 And that's a quote.

And those results indicate for all of the locations studied within the study area that we can achieve a level of service D or better operations, which is an acceptable operating and design standard within an urban environment, so a recognized industry

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So I'll step through each one of those points perhaps to enlighten some of the conversation that was just mentioned. We have here, of course, the intersections that Mr. Hoe had indicated in his review were appropriate and provided the primary basis of our findings and recommendations.

As a point of information, in the early planning efforts for this property five years ago, we also considered the roundabout to the north and the signal on the Boston side of the world and we have information for that. But really, because of the evolution of this particular project to a much smaller project of a residential nature, that the intersections that were documented in November, which is shown as solid dots, as well as the signals at Independence were, in fact, appropriate and we believe that to be the case for this peer review.

Notwithstanding that, we'll be glad to consider requests to study additional locations within the neighborhood in the context of the likely level of impact that this project will have in that area.

23 The findings in November, as we presented 24 them, would indicate that at 196 residential units and

modeled and presented in the study to show that at each 2 individual study location, that in most cases we have a

3 level of service A, B, or C operation. 4 Five years from now, with background growth

independent of this project and the additional trips 6 that I just mentioned, and at only one location would 7 we see a level of service D, which is, again, an acceptable operating standard, which is at the 9 intersection of Gerry and Independence, the left turn 10 movement exiting that driveway.

So the findings indicate very convincingly and clearly using industry standards that the impact of this project based on industry standards will not materially change traffic, that intersections of the study will operate well below capacity.

16 We also stated in our testimony that the trip 17 generation rates that we used, while they're the 18 industry standards, are, in fact, much higher than the 19 realities that currently occur at Hancock Village, 20 which we've inventoried. We have the information, the 21 trip generation information, for the folks who live in 22 Hancock Village. We know how many units are in Hancock 23 Village, and we can compare that to the industry 24 standards. And we did that at last I spoke. Those

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1 using trip patterns that are well established based on 2 existing documented patterns for Hancock Village, that 3 a little over half of the trips that would be generated from this development would be oriented to the north. 5 And that represents an increase over the course of a 6 typical commuter hour of about one vehicle per minute. 7 That is the highest level of impact that this particular proposal will have on Independence Drive, 9 Grove Street, or points north. 10

When you look at local roadway connections, Beverly Road, for instance, we expect that those trip 11 increases would be in the order of one vehicle every 10 to 12 minutes, five cars over the course of an hour, and likely for South Street.

And within the neighborhood that's most proximate to Asheville Road, we expect that the trip 16 increase in that vicinity would be about one vehicle every two minutes, 30 or 40 vehicles over the course of 18 an entire hour.

20 Those numbers were presented in the November 21 study and we believe, based on what was submitted at 22 peer review, are an appropriate representation, an 23 accurate representation of the level of impact that 24 this project will have on area roads. And that was

indicate that the industry standard trip rates which were used are about 30 percent higher than what 3 actually occurs for this existing residential

We also very clearly stated that the trip distribution patterns, which were reviewed by Mr. Hoe, depend on existing observed documented patterns for the folks who live in Hancock Village. So there's no magic. We're not really guessing at what these patterns are going to be. We know what they are based on how people use the streets today for Hancock Village and the adjoining neighborhood. So we're confident that what we've presented is the appropriate industry standard and shows that there's a very modest impact that will not change traffic operations.

That said, we are well aware that supplemental data has been requested and we are, in fact, in the process of obtaining that based on what we read in the review, submitted review. We are in the process of conducting a speed study and additional traffic counts on Independence Drive.

As a point of information, the growth patterns 23 that were applied really do reflect documented town-provided traffic counts for Beverly Road and South

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Street. So those two signalized locations were the subject of redesign by the Town in 2005, so we have real data that we are able to compare it to.

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In 2012 when our accounts were established at those very same locations, direct comparison of data shows that there's no growth whatsoever over a six-plus-year period. Nevertheless, we've used a 1 percent annual growth rate in our assessment which we believe is conservative, a high guess as to what might occur over the next five-year period.

So we'll do the count as suggested, but we also have more pertinent information that very clearly supports that what we've presented to the Town is conservative.

Second, travel speed surveys. We have proactively started collecting speed information for Russett Road in particular. We did that in February of this year, and we're in the process of doing that for Independence Drive.

The finding to date is interesting. Russett 21 Road is a narrow road. It's a parking lot in a neighborhood setting. It's a low-volume, local roadway. The speed characteristics of that roadway reflect that condition. The regulatory allowed speed any new light on the need for safety counter measures.

That said, it's a snapshot of what we've received from the police department. This will be documented more formally in a response document. But over a three-year period, there have been 14 crashes on the roads that comprise Independence Drive, South Street, Russett Road, Asheville Road, Beverly Road, all roads within the area that we've defined as our study

Of those 14, only three were in some way related to a pedestrian incident at or near a crosswalk, and more than half of these are actually crashes that do not occur at intersections. They are a direct result of hitting car doors, running into trees, leaving moving cars, and other nonpedestrian-related matters and they're not necessarily all concentrated at any one given location.

This graphic presents information for each of the years, 2011, '12, and '13 in a graphical format to give you a sense as to where these crashes are occurring based on the local records and the nature of the crashes. And what's interesting is that if you look at the intersections at Gerry Road or Sherman and Thornton, you'll see that there are two crashes at each

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1 limit on Russett Road is 30 miles an hour. The speed 2 survey done using radar recorder equipment over an 3 extended period of time indicates that the 85th percentile speeds that exist on Russett Road are 20 5 miles an hour and directly reflect the condition of 6 being a narrow road with parking.

That will directly factor into the site line calculations that have been provided and discussed with this Board which exceed the minimum design criteria by a factor of two. So we don't expect, even with the newer information, that there will be any new findings or a need to adjust what we've presented in terms of driver location, layout, or ability to meet criteria.

13 Third, crash data, a subject requested by peer 15 review and made a point of discussion by the police department. We proactively had requested those 17 records, received them yesterday. We'll present that 18 information shortly, but the finding of that is that 19 the local crash records are not materially different 20 than what we've already presented in the November study 21 and, in fact, have been updated to the latest three-year period and that those findings indicate that 23 the crashes on any neighborhood street are lower than

average. Well below average, in fact, and do not shed

over a three-year period. The balance of crashes out of the entire 14 occur at midblock locations that are likely to be associated with people opening up car doors. It's difficult having a four-lane section that really has parking as part of one of the travel lanes, so you're going to have occasions when people open up cars doors and things of that nature.

When you look at the crash-rate analysis, when you take those crashes and you apply them to the individual study intersections that we looked at, the signal at Russett Road, for instance, the two primary driveways serving Hancock Village, Asheville Road, 13 you'll see that one or two crashes might occur over the 14 course of an entire two-year period at this location. The cash rate calculates to be just more than .12, which is about five times below average. There's no distinct trend here. Crashes occur and are quantifiable, but there's no distinct trend and there's no distinct location where an above-average crash experience occurs.

These are the results that were presented in the November study which show a very similar pattern, and again the trip crash rate is well below average. Another point of discussion, the site

14 (Pages 50 to 53)

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- circulation emergency access. Mr. Hoe indicated they 1
- 2 want to see the AutoTURN analysis. We'll walk through
- 3 what we've provided to the Board. The findings for
- 4 that, we've modeled emergency access and circulation
- using Brookline's largest potential response vehicle,
- 6 which is the E1 Bronto, 100-foot tower truck. It's a
- 7 very large vehicle. We've done computer modeling which
- shows that the maneuvering areas to and within the
- 9 project site using 22-foot-wide roadways is acceptable
- and appropriate to accommodate that largest designed 10

11 vehicle and other vehicles that also currently respond.

12 The design for this facility is consistent with approved Brookline residential projects, which 13

14 I'll walk through in a moment, and is also consistent

15 with recently approved residential projects in adjacent

16 communities, particularly Newton and Needham, which are

17 known as mutual aid communities, communities that have

18 the ability to share emergency response assets.

19 And finally, we understand that there's some

20 reluctance or some concern on the design of hammerheads

- 2.1 and there are options, at least in one particular area,
- 22 to make adjustments to the extent that's desirable,
- 23 something the fire department would like to work with
- 24 the applicant on.

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- service this building, and based on the analysis of the 1
- 2 largest vehicle, it has more than ample maneuver area
- 3 with surplus to boot that would allow for a simple
- 4 maneuver consistent with other approved projects in
- Brookline and other mutual aid communities and the
- 6 ability to have another vehicle approaching at the same
- 7 time without inhibiting the ability for that vehicle to exit the site.

9 This location does have some flexibility in 10 terms of allowing for a more traditional cul-de-sac

11 design. It would result in less landscaped area, so

12 the applicant's position in presenting this was to

retain as much landscaped area as possible. It works, 13 14

but it can certainly be converted in this instance to a

larger cul-de-sac element.

As we look at the Independence connections to the east and to the west toward the Baker School, we've

18 done the same analysis on the east side which shows, 19 again, while this is not a traditional cul-de-sac

20 element, it provides more than ample maneuvering area

21 without any impact to parking for that largest vehicle

22 to reverse direction and to have another vehicle follow

23 in the opposite direction with the ability to be

24 bypassed.

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- This is all being done in the context of a 1 2 project in which the building will be sprinklered, so
- 3 the nature of the emergency response is going to be
- factored against a sprinklered building. The
- 5 likelihood of having to respond to a multiple-alarm
- 6 event is diminished with the function of the type of

7 design that's being contemplated for the project. 8

So we talked about the access along Independence at two locations, one to the west, one to

10 the east, and the Asheville connection and we've

conducted AutoTURN analysis using the largest designed 11

vehicle available to the Town. And we've drawn 12

13 circulation paths for each of the primary aisles or

14 lanes that serve the existing Hancock Village and the

15 proposed largest building in this case. We've done the

16 same for the west side. And we've identified locations

17 A, B, and C which in every case are shown to have more

18 than acceptable maneuvering area to allow for the full

19 maneuver of a vehicle around, to return at the same

20 time an approaching vehicle would be travelling. So

21 there's sufficient width, there's sufficient

22 maneuvering area for that largest vehicle. Same with

23 Location B behind that building.

24 The hammerhead design at Location C would 1 And here's the hammerhead nearest the Baker 2 School. That's the Baker School over here. You can 3 see that the limits that have been defined are, in

fact, probably much more than you really need for a 5 traditional hammerhead design. You can have multiple

6 large vehicles in this area and still have the ability

to reverse directions with a T maneuver to exit the 8 site. So there's no issue with the ability for this

9 project, as it's currently designed, to appropriately 10

accommodate the largest designed vehicle that is

11 available to the Town, or multiple vehicles, for that 12 matter. 13

As a point of reference, we have been involved with designing other projects that have the same types of design features, or others have. In the case of Brookline, the Olmstead Hill development in particular which was approved in 2010 and built in 2012, has a long roadway connection shown here with a side connection to the rear of this building and that building. That, in fact, has that hammerhead design in

Here is the site plan that was approved. It shows that long extension, the hammerhead design. The AutoTURN analysis of that plan indicates the ability to

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handle that brunt of vehicle acceptably at athree-point turn without impact to parking.

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What's interesting in this particular example, it's only a recent project, but its design is much more constrictive than what is being proposed for this site at Location C or Location E, as I just presented. The residential design that we've presented to this Board is far less restrictive than this, another approved project in town.

In other mutual aid communities, communities where fire assets may be shared with Brookline, for instance, Needham on Greendale Avenue, that hammerhead design right here -- in fact, this one is a bit more restrictive than what's being proposed, but this was approved and allows for that three-point turn maneuver.

110-115 Dedham Street in Newton, another mutual aid community, connection to a hammerhead serving multiple residential units. This is a common design element for sites that require hammerhead design. It is a tool used for designers to ensure that there's ample maneuvering space for the given design vehicle.

Other projects in Brookline, Hammondswood, hammerhead design, pseudo-hammerhead on this side of they've got a lane to find out that they've got five

2 feet of effective width because someone is parked on

3 the curb. And so effectively, during daytime hours,

4 that road really does function as a single lane in both

directions and there is benefit, in our opinion, to
 formalizing that. But it's not something that this

7 applicant necessarily proposed independently as a

8 function of their project, but is willing to evaluate

and consider those in cooperation with the Town.

Beyond the restriping initiative, questions arose on whether or not a signal is appropriate for Sherman and Thornton, for instance, or Gerry Road. We've conducted a full signal warrants analysis. The warrants that would dictate the need for a signal, for the benefit associated with a signal, are not met.

We also have considered warrants associated with pedestrian crossing signals. There are two types of signals that are considered. One is the traditional flashing beacon. It's more of a heads up to a motorist that someone is in the crosswalk. It makes the driver more aware of activity in a crosswalk.

The second form is known as a HAWK, which is a pedestrian-activated signal that literally shows a red ball, so you're required to stop. It's a middle ground

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the building. So there are many examples of where this is actually used.

As we prepare our supplemental data collection, our continued evaluation of crash data, traffic volume, speeds, we will be evaluating potential improvements to Independence Drive. We think that there are positive things that may contribute to safety and traffic calming in particular along that road.

We are currently evaluating the feasibility of replacing the four-lane section with a single-lane section and an adjacent bike lane with parking. That form of design is achievable within the existing curb-to-curb dimension of the street and can be done in a way that does not influence the roundabout or the signal systems at either Russett Road or South Street. Four-lane sections don't exist in that area of -- it's really Grove Street. Right at that point is Grove Street.

But the section that we're looking at is south

of Russett Road. It's the section where parking is
allowed during daytime hours on either side of the
street and that creates issues that are reflected in
the crash data that I just mentioned. It's very
difficult for somebody who's approaching thinking

between a flashing beacon and a full traffic signal.
 That's the best way to put it. And that technology has
 been used in Brookline. Again, the applicant will work
 with the Town to evaluate these types of improvements
 and possibly to help and assist in advancing them.

The applicant has always said that they were interested in expanding TDM measures through the expansion of the Zipcar availability to the extent that Zipcar allows that. There's a petition process of sorts that you need to go though. They are willing to consider expanding the shuttle service. That was part of the testimony I provided to this Board last time I was here, and we'll certainly consider other things like additional bike racks throughout the development.

These are the types of signals that we're currently evaluating. This is the HAWK, High-Intensity Activation Crosswalk. This is done at a pedestrian push-button activated or motion-activated type feature. It does require a stopped position for vehicles on Independence Drive.

The second form is this form, which is a

flashing beacon. This example is actually one that we designed, my firm designed, at Kringle Candle in Western Massachusetts on the state highway. So the

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equipment that's shown here is state-approved and 1 2 endorsed equipment. You can see that some of the 3 features that make it effective are delineated, in this 4 case brick stamped type pedestrian crossing, clearly visible signs. And you can't see it quite in this 6 diagram, but there are actually yellow balls. They get 7 activated through a motion detection system if a 8 pedestrian attempts to cross.

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The fire department comments from March 5th in particular, we've reviewed those. I've already described the AutoTURN analysis and findings. The emergency response times was a concern that was raised. It's certainly something that the team is concerned with as well. You know, this particular portion of Brookline is located on the border of Boston, and it's likely to rely upon, to the extent needed, a mutual aid agreement that exists with Boston and other communities.

19 We know that Brookline has a mutual aid 20 agreement that allows it to share resources, fire asset 21 resources, trucks, equipment, and people with adjoining 22 communities. So we wanted to understand the context in 23 which a response would be provided to this development, 24 to the existing Hancock Village, to the Baker School,

that the applicant wanted to understand because they're 1

2 concerned, as anybody would be, about the ability for a

3 town emergency response team to get to the existing

Hancock Village, the Baker School, and/or their own

5 project that they're proposing. And there's reason to

6 believe that through the mutual aid agreement and the

7 proximity of that station, that provides an additional

level of comfort, if you will, that the MFPA and ISO

9 standards can be met through the mutual aid agreement 10 that exists today.

So in conclusion, our next steps, and they're underway now, is data collections, evaluation. We're going to develop conceptual improvements that reflect initiatives on Independence Drive, and we'll document that in a comprehensive response. If there's any particular question that the Board has, I'm glad to answer it.

MR. GELLER: When you say that you will be submitting a complete response, you'll be submitting it in a written format, I assume?

MR. MICHAUD: Correct. We have a number of comments that were issued in letter form from Police, Fire, Public Works. Some which reflect questions or comments that have been made by the peer reviewer. So

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1 or any other use that is in this section of Brookline.

2 So we know there's a mutual aid agreement that allows

3 the community who has opted in to send a request of

assets from an other community within the Commonwealth

5 that has also opted in. Boston is one of those

communities, West Roxbury section in particular. 6

Within the proximity of Hancock Village, Boston Fire Department District 12 actually has a fire station with ladder and an engine capability that is 10 within a five-minute drive of Hancock Village, and implementing the mutual aid agreement would allow 11 12 Brookline to meet its obligations in emergency response 13 to comply with MFPA and ISO standards that Chief Ford 14 had mentioned at the March 5th hearing.

15 So just as a point of context, what's shown here is a two-mile ring around Hancock Village which is 16 right there. And you'll see the number of fire 17

stations that exist in the Boston Fire District.

19 There's a lot of them. And one in particular you zero

20 in on is located within a five-minute drive -- response

21 time, I should say, of Hancock Village. It's actually

22 equidistant to the exiting Brookline station that was

23 mentioned by Chief Ford.

24 So this is a point of context and information 1 rather than do this piecemeal, what we'd like to do is 2 a comprehensive single response.

Obviously, there's more work to do in having that response reviewed by our peer reviewer and there will probably be another round of responses to that, so there's a bit of a process to go. You know, we hope to do this in preferably one or obviously probably two steps. We want to provide that comprehensive written response.

MR. GELLER: In terms of process -- and I think this goes to your question, Mr. Hussey -- how would this be effectuated? I assume that the parties, through Ms. Steinfeld, will set up meetings and there will be some communications so that Mr. Hoe can get what supplemental information he's looking for, and also point to clarity communications between the parties so that you can arrive at your final supplemental report.

MR. MICHAUD: It would be my preference, and I would appreciate it, if there could be some line of communication, because we're in the line of business to try to efficiently and comprehensively address issues and if we don't know about those issues until the night of the hearing, for instance, it's hard to respond to

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Page 66 Page 68

- 1 those. And we take written reports seriously. We 2 think that they're comprehensive and while may not
- 3 address every single issue, there may be other
- 4 questions that arise, we don't want any surprises, so
- having that level of open communication I think would 6 benefit both sides.

7 MR. GELLER. Okay. Well, make sure it takes 8 place.

9 MS. STEINFELD: If I could clarify, just so I know the process, are we expecting the applicants' 10 11 consultants to submit a written report or that I will arrange meetings between the two consultants -- peer 12 13 reviewer and the consultant?

14 MR. GELLER: I think before they're able to 15 submit their supplemental report in response, that 16 there are a number of questions that need to be 17 answered and there's some clarity that needs to be worked through, so I think they need to communicate 18 19 first so that that supplemental report can be issued. 20 And obviously, once that supplemental report issues, 21 we'll need you to look at it and respond.

22 MS. STEINFELD: Okay. Thank you. And excuse 23 me, for the record, Allison Steinfeld, planning 24 director.

1 calculation of the number of spaces per unit, whether 2 it's 1.4 or 1.78 -- where the math is inconsistent.

3 MR. MICHAUD: The site plan shows 1.78.

4 That's the number. I don't know where the -- I'll have to research where that 1.4 --

MR. HO: It's in your report.

7 MR. MICHAUD: Okay. That's probably a typo. So the site plans correctly represent the parking.

9 MR. GELLER: 1.7? 10

MR. MICHAUD: Yes.

11 MR. HUSSEY: That's the number I got too.

MR. GELLER: Thank you.

13 MR. SCHWARTZ: Mr. Chairman, if I could, I 14 wasn't planning on speaking tonight but I think 15 something a little bit unusual happened, so I felt I 16 should take a few minutes to speak.

For the record, I'm Steven Schwartz of the firm Goulston & Storrs, counsel for the applicant. And for the record, I think it's important -- Mr. Michaud alluded to it -- but for the record. I'd like to read some statements in the peer review report so that everybody hears them and they're in the record.

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"Study area: The study area is appropriate for the proposed project. The roadways and

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MR. GELLER: I was wondering who you were.

MR. HUSSEY: One more question. I understand that you both have used the classification of urban environment as the basis for your studies? Is that correct?

MR. MICHAUD: My answer to that would be that we've applied a suburban standard to estimating the traffic-generating characteristics of this project; a suburban standard in which public transportation, things like shuttles to Coolidge Corner and other locations don't exist. So the trip rate methodology that we used is a suburban standard. It's a higher generating standard that we know is conservative.

13 14 The urban context that I mentioned relates to 15 levels of service and operating standards within an 16 urban environment where you have dense residential 17 development, neighborhoods, commercial uses, things of that nature. A traditionally accepted design standard 18 19 is a level of service D or better. We've achieved 20 that. So that's the context of my comment. MR. HUSSEY: Okay. Thank you. That clarifies

2.1 22 it.

23 MR. GELLER: Can you speak briefly to the --24 there seems to be some kind of a mystery about

intersections that will be most impacted by travel

paths of traffic associated with the proposed project

have been included and analyzed. 3 4 "Trip generation traffic increases: The trip generation estimates were calculated according to industry standards. The trip generation methodology is

appropriate for this project. The traffic study appropriately utilized the higher trip generation 8

method of the two. In this case, the ITE data. 10 "Trip distribution: The trip distribution

11 method is appropriate for the project. 12

"Traffic operations analysis: Due to the multiple driveways and different travel patterns, we'll share traffic increase resulting in less impact to any

16 "Site plan review: Based on the existing 17 observed parking demand, the 1.4 spaces" -- now we know it's 1.78 -- "is sufficient for the proposed 19 expansion." Nothing in the site plan review about

20 grades, site distances, et cetera. 21 So, what are you going to believe? There are 22 times when, due to the passage of time or new 23 circumstances, you might have a requirement for further

information. That's not the case here.

18 (Pages 66 to 69)

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Page 70 Page 72

This report is dated March 20th, six days 1 2 ago. It was delivered to the applicant three business 3 days ago. One can speculate what happened. I'm not 4 going to do that, but one can speculate. Apparently somebody thought this initial report was too positive.

5 6 There's also an element of fundamental 7 fairness here. As Mr. Michaud said, we expected peer review and we thought we had an agreement with the Town that you were going to give us an opportunity to study 9 it and present an adequate response at a public 10 11 hearing.

12 That clearly did not happen here. We're hopeful that going forward that will be the case. 13 Thank you. Mr. Chairman. 14

MR. GELLER: Thank you. 15

16

17 MR. HO: Mr. Chairman, I just wanted to make 18 some clarification here. I think the gentleman had read some of our comments -- I think he's reading it 19 20 out of context.

21 For example, you know, the proponent was very 22 weak in identifying mitigation. Okay? And I think it 23 was very clear in our memorandum where it indicated that traffic calming, you know, needs to be considered 2.4

2 distribution. He didn't read the whole paragraph, 3 because at the very end of our paragraph we did say, however, that information was not provided for the Building 13 that's coming out of Asheville. Okay? So 6 the gentleman has to read the whole thing out of, you 7 know, context a little. There was no information provided. All we're asking for is clarification. 9 While we agree that the trip distribution is accurate, 10 the methodology, there's no issue, we're asking for 11 more information to clarify what's going on at the traffic that's coming out of Asheville. 12

So the gentleman just indicated about the trip

So I think it's additional information and additional data that we are requesting, and that's what we are asking. So I just wanted to, you know, make that clarification.

MR. GELLER: I would like to say one thing that I think is important and I'm sensitive to. And there are two sides to it, and I recognize that. We're under relatively tight constraints and I know that the reviews are going on as quickly as possible and I believe that people are fairly trying to disseminate information in a fair and reasonable fashion, giving others as much chance as possible for there to be

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for this project. 1

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I think when we had mentioned traffic calming, we were referring to the neighborhood streets. We're not just referring to Independence Drive, because this study right here, studied areas, basically indicated that, you know, the overall study is focused on Independence Drive.

But the study should also include -- you know, if, as we move forward, as we work with the proponent 10 in coming up with traffic calming for the neighborhood, the proponent would have to look at the residential 11 streets such as Russett or South Street or Beverly 12 13 Street. Those are the streets that are right next to

14 the development. 15 So how do you do traffic calming? One of the process of traffic calming is you need to know what's 16 out there today because at some point, whether it's a 17 18 raised intersection, whether it's a speed bump that 19 you're providing, you need to determine, you know, that 20 that's going to be effective. The only way to find 21 that out is you have to collect more data. So 22 regardless of, you know, whatever the proponent had 23 indicated, you know, additional data that they would

have to follow to form the baseline.

adequate reviews and responses.

Having said that, I would urge everyone to try harder to give everyone a fair opportunity to review information and respond.

MS. STEINFELD: Thank you, Mr. Chairman. If I

could address the issue of the distribution of the report. Upon receipt of the report, we immediately distributed it to the ZBA internally and to the applicants and subsequently placed it on the web all within two hours. Thank you.

MR. SCHWARTZ: Just to be clear, we have no 12 issue with the distribution of the report. I think the 13 Board understands that.

14 MR. GELLER: I understand. I think there are 15 time constraints, but we're doing the best we can with 16 it.

MR. SCHWARTZ: We understand that. That's not what we're talking about.

19 MR. GELLER: Anything else?

Okay. So what we will do is, we are going to continue until the next hearing date, which is April 10th, 7:00, same location, I believe. The next hearing will be dedicated in particular to stormwater

review, and it will follow in the same order that you

19 (Pages 70 to 73)

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1	saw at tonight's hearing proceedings, so we would	
2	expect to have a response from the applicant after we	
3	hear peer review. Thank you.	
4	(Proceedings suspended at 8:52 p.m.)	
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1	I, Kristen C. Krakofsky, Court Reporter and	
2	Notary Public in and for the Commonwealth of	
3	Massachusetts, certify:	
4	That the foregoing proceedings were taken	
5	before me at the time and place herein set forth and	
6	that the foregoing is a true and correct transcript of	
7	my shorthand notes so taken.	
8	Dated this 7th day of April, 2014.	
9		
10	Kristen Krakofsky, Notary Public	
11	My commission expires November 3, 2017.	
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